

SUMMARY

In FY 1998, Science and Technology consists of Pacific Northwest National Laboratory (Pacific Northwest) Waste Management (WBS 1.7.1.1, Project Baseline Summary [PBS] ST01) and Science and Technologies (WBS 1.7.2.1, PBS ST02). PBS ST02 is DOE-HQ work scope and is currently unfunded.

Implementation of streamlining initiatives within Pacific Northwest's waste operations system is currently underway. As a result of an effort to evaluate potential long-term cost re-engineering within the laboratory and Hanford Waste Management Systems, a series of potential initiatives were developed. Full implementation of these measures could save \$250,000 per year within Pacific Northwest's system. Potential cost savings initiatives totaling approximately \$750,000 within Waste Management Hanford's (WMH) budget control were shared with WMH management.

The large facility moves are well under way with 324/3718G Building staff moving to the Advanced Process Engineering Laboratory (APEL), 3720 Building staff moving to the Physical Sciences Laboratory (PSL), 331 Building, and APEL, and LSL-II Building staff moving to PSL and the 331 Building. Environmental Field Services (EFS) staff efforts in these moves have included evening barricaded shipments of hazardous research chemical stocks as well as processing thousands of containers of unwanted chemical stocks and old unneeded samples. These efforts to-date have been completed without transportation or environmental incident. These continuing efforts will impact EFS and other portions of Effluent Management Services (EMS) through early summer.

Significant attention was given this month to another Hanford Site contractor's discovery of polychlorinated biphenyl (PCBs) in paint chips. This discovery led to incorporation of a management strategy for PCB-paint chips in the Federal Facilities Compliance Act (FFCA), which is under development.

The Second Quarter FY 1998 Pollution Prevention Program Report was submitted on April 17. Five new pollution prevention accomplishments were reported this quarter resulting in waste reduction of 1.8 metric tons of sanitary waste, 230 kg of hazardous waste, and over two million liters of waste water. Over fifty metric tons of office materials were recycled.

Effluent Management collected the required air and water samples during the month and confirmed that all reported effluents discharged to-date are below historical release levels and compliant with existing permits. All routine permitting and regulatory coordination work is proceeding as scheduled with the exception of delays associated with issuing the Hanford Site Air Operating Permit. These delays are of low impact and do not affect the laboratory's current compliance status.

Regarding the 325 Surveillance and Maintenance task, all radiological surveys, nuclear control inspections and preventive maintenance checks were completed. The Miscellaneous Surveillance and Maintenance task inspected 18 facilities, including the Arid Land Ecology Reserve (ALE) site, White Bluffs, and the 200 Area Buildings. No significant issues were noted.

Design review by 204AR Building personnel continues to be delayed. Scheduled site visits, which are required to finalize structural design, continue to be postponed. This project cannot make further progress until these issues are resolved. Meetings with all involved parties have been scheduled for the first week of May.

Construction is about three weeks behind schedule in the 325 Building RLW Load Out Modification task. With the delivery of the tank, schedule bottlenecks are relieved and Pacific Northwest will be closely monitoring work to recover schedule slippage. Structural pit work can now be completed. Piping connections to the tank are in progress and control room finishes and electrical work continues. Truck lock extension work is in progress.

Fiscal year to date milestone performance (EA, DOE-HQ, Field Office, and RL) shows that seven milestones (100 percent) were completed on or ahead of schedule, with no milestones completed late. There are no milestone exceptions.

ACCOMPLISHMENTS

- Submitted the Toxic Chemical Release Inventory Report, EPCRA 313, on schedule with no release being reported for nonexempt maintenance activities in CY 1997. (Planned)
- Submitted a "Request for Relief" pursuant to WAC 173-303-500(3) to Washington State Department of Ecology (Ecology) to allow expanded formalin recycling at the LSL-II Building. (Unplanned)
- Shipped on schedule 211 hazardous waste drums to ENSCO West Incorporated (ENSCO) from the 305B, EMSL, RTL-590 and 2400 Stevens Buildings; 32 drums of hazardous waste from the Marine Science Laboratory in Sequim; and five drums of hazardous waste cylinders to BDT Incorporated for treatment and disposal. (Planned)
- Material transportation staff performed on schedule four major material relocation efforts in support of Environmental Technology Division facility moves to APEL. (Planned)
- Shipped on schedule approximately 4,000 kg of containerized waste to the Arlington, Oregon landfill and approximately 30 cubic yards of asbestos from the 326, 331 and 306W Buildings for disposal. (Planned)

- Shipped on schedule 19 drums of supercompacted waste and 32 drums of Allied Technology Group (ATG) cleanup waste, stored at ATG since the alpha uptake event in 1995, for final disposal. (Planned)
- Neutralized on schedule approximately 30 liters of flammable/corrosive wastes to remove the corrosiveness in preparation for shipment to the Central Waste Complex (CWC). (Planned)
- Completed eight facility vulnerability assessments and review and approvals of 25 prior assessments on schedule. (Planned)
- Completed documentation of detailed information on the spent fuel fragments in the high level radiochemistry facility on schedule. (Planned)
- Collected the EMSL and the 331 Building NPDES compliance monitoring samples for April and submitted the March monthly Discharge Monitoring Reports on schedule. (RLSTO12852 / RLSTO12851)

COST PERFORMANCE (\$M)

	BCWP	ACWP	VARIANCE
Science & Technology	\$8.6	\$8.1	\$0.5

The \$0.5 million (six percent) favorable cost variance is within established thresholds.

SCHEDULE PERFORMANCE (\$M)

	BCWP	BCWS	VARIANCE
Science & Technology	\$8.6	\$9.3	(\$ 0.7)

The \$0.7 million (eight percent) unfavorable schedule variance is within established thresholds.

ISSUES

- 1) **Issue/Impact:** Ecology is still proceeding with its intent to regulate certain types of "simulants" (chemicals used in testing as surrogates for dangerous waste).
Strategy/Status: Pacific Northwest staff intend to meet with Ecology (and Environmental Protection Agency [EPA] if they will agree to participate) to discuss the impacts of that proposal on the Laboratory's activities. Ecology has not pursued the policy recently due to staff turnover.
- 2) **Issue/Impact:** No more explosives are permitted to be stored in the 305-B Building, as explosives are not allowed per the Facility Use Agreement (FUA). The Permit provides that one pound may be stored. However, the FUA references a set of regulations that will not allow this under the current conditions in 305-B Building. There will be a significant financial impact if explosives are not permitted to be stored in the 305-B Building. Every explosives shipment costs \$9,000. Costs will increase significantly if explosives are shipped out on the 90-day clock.
Strategy/Status: Staff has worked with Safety personnel to identify all requirements, and are currently obtaining all equipment for safe storage of explosives, and will be modifying the Permit. The explosive equipment has been shipped. Modification of the 305-B Resource Conservation and Recovery Act (RCRA) Part B permit has commenced and will include the new explosives storage cabinet. The 305-B Building is scheduled to resume the receipt of explosive wastes by May 15.
- 3) **Issue/Impact:** Pacific Northwest staff has been unable to move several transuranic waste drums from the basement of the 325 Building, which were scheduled to be moved for real time radiography (RTR) at the 306-E Building.
Strategy/Status: Pacific Northwest has encountered radiological control issues surrounding the movement of these high dose rate containers and is seeking a variance from WMH as it pertains to visual verification of the inner contents. The project was unable to gain the variance for verification of the high dose rate transuranic (TRU) drums in Room 64 of the 325 Building. During the most recent TRU verification, one drum failed due to contained liquids, so the TRU stream remains at 100 percent verification. A work plan submitted to 325 Radiological Control for movement of the seven high dose TRU drums and five other drums from the 325 Building to the 306-E Building was approved in April. These drums are scheduled to be moved to 306-E for Real Time Radiography verification during the first week of May.

- 4) **Issue/Impact:** On April 13, one Pacific Northwest generated hazardous waste drum failed analytical verification upon receipt at ENSCO, a commercial Treatment, Storage and Disposal Facility (TSDF). The drum was shipped to ENSCO located in Rancho Dominguez, California on April 2, from the Pacific Northwest operated 305B Facility with approximately 130 other hazardous waste drums.
Strategy/Status: An investigation of this incident determined that the drum in question contained a glycolic acid solution, which should have been labeled as a corrosive liquid in transport instead of a Washington State Dangerous Waste. The misclassification during transport resulted in an off normal event, which was classified on April 13. ENSCO's initial indication to Pacific Northwest was that three hazardous waste drums had failed analytical verification. ENSCO formally notified on April 15, that two of the three drums did not fail verification and were processed for treatment and disposal.
- 5) **Issue/Impact:** Two containers of liquid radioactive waste being prepared for shipment from the 305-B Building to the Central Waste Complex failed verification testing by Waste Management Hanford. The liquids were submitted as non-RCRA regulated Low Level Radioactive waste, but tested as having a pH less than two, which would make them Radioactive Mixed Waste. The event was reported and classified as an Off Normal Occurrence.
Strategy/Status: Causal analysis, corrective actions, and lessons learned are currently being developed for the waste verification failure issue. Several specific actions, and a recovery plan, inclusive of problems and information from related waste identification events, will be completed prior to issuance of the draft final occurrence report on May 25.
- 6) **Issue/Impact:** Pacific Northwest is currently negotiating with Lockheed Martin Hanford to place a Memorandum of Understanding (MOU) that would allow emergency decontamination liquids from the 325 Building emergency decontamination showers to be disposed via the Radioactive Liquid Waste System.
Strategy/Status: The MOU and Safety Analysis Report for Packaging (SARP) for the LR-56 cask system are still behind schedule. A rough draft MOU is being routed for final review and approval. Pacific Northwest staff met with representatives of Waste Management Federal Services Northwest Operations (WMNW) to request an Engineering Change to the existing SARP for the LR-56 system. The revised SARP is scheduled for completion by the end of June.
- 7) **Issue/Impact:** Revisions to the Tri-Party Agreement by Bechtel Hanford Incorporated (BHI) have provided additional procedures to accomplish the Waste Identification Data System (WIDS) characterization. Review of the data BHI has obtained, with comparison to Pacific Northwest assigned sites, is necessary to determine whether all the activities proposed by this project are required.
Strategy/Status: RL-STO and probably EPA will need to review the change in the WIDS Characterization effort.

- 8) **Issue/Impact:** The temporary shutdown of the 204 AR Facility operations is currently impacting the construction project that is planned to modify the transfer system in the building. These modifications are required at the Hanford Site to provide the ability to off-load the LR-56 French Tanker safely. These system modifications are required to support the planned start of the deactivation of the 340 Facility and the Hanford railroad. These deactivation projects are scheduled to begin in October of 1998. The continuing closure of the 204 AR Facility could directly impact these two scheduled milestones.
- Strategy/Status:** The temporary operational shutdown will continue until the Authorization Basis for the 204 AR Facility is modified. This needed modification will be developed by the 204 AR Facility Engineer. Once the modification is prepared, Lockheed's Safety and License Group will review the modification and then prepare a change package for approval. Access to the facility can then be gained and construction initiated following RL approval of the Authorization Basis modification. Meetings are planned in May with the Readiness Assessment and Lockheed staff to determine what work can be initiated.
- 9) **Issue/Impact:** The Washington State Department of Health (WDOH) conducted an inspection of Plasma Arc Furnace located in the 324 Building on April 23. The inspection was initiated primarily due to concerns the department had regarding a tritium sampler that was shut off for security reasons during the processing of neutron generators containing less than 20 Ci of tritium. WDOH is poised to issue a Notice of Violation (NOV) based on the premise that the processing of neutron generators was not within the scope of the original process description and that tritium sampling was required for this activity. WDOH believes that without access to classified source term information or sampling results they will be unable to verify the actual quantity of tritium released during the time that the tritium sampling system was shut down. Failure to provide WDOH access to the classified material will likely result in a NOV with the requirements of WAC 246-247-80(10). The approval of a pending Notice of Construction application to permit processing additional neutron generators will be dependent on the timely resolution of this issue.
- Strategy/Status:** Meetings are planned between RL and affected contractors to discuss access to classified information and response to potential NOV.

COST VARIANCE ANALYSIS: \$0.5**WBS/PBS****Title**

1.7/ST01

PNNL Waste Management

Cause: The current positive variance is within established thresholds; however, the variance is primarily associated with the operating expense projects where there was a combination of billing delays and efficiencies on planned tasks.

Impact: None

Corrective Action: The variance will be reduced upon receipt of delayed billings.

SCHEDULE VARIANCE ANALYSIS: (\$0.7)**WBS/PBS****Title****1.7/ST01 PNNL Waste Management****Cause:** The schedule variance is within established thresholds.**Impact:****Corrective Action:****1.7/ST02 Science and Technologies****Cause:** N/A**Impact:****Corrective Action:**

MILESTONE EXCEPTION REPORT

<u>Number/WBS</u>	<u>Level</u>	<u>Title</u>	<u>Baseline Date</u>	<u>Forecast Date</u>
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OVERDUE - 0**FORECAST LATE - 0**

There are no milestone exceptions.